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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,934	10/15/2001	Hajime Akimoto	520.36114CX1	2676
20457	7590	11/23/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			LIANG, REGINA	
			ART UNIT	PAPER NUMBER
			2674	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/975,934

Applicant(s)

AKIMOTO ET AL.

Examiner

Regina Liang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 24-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 24-30 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

The originally claims 1-23 are directing to an image display device for displaying image data on an image display part having a display pixel array, an image data input circuit inputs image data into the image display part by selecting addresses in a row direction and a column direction of the display pixel array so that the display pixel array has two neighboring areas having different frame rates, wherein the display pixel array including row direction address lines and column direction address lines and each pixel array including a selecting circuit which is connected to one of the row address lines and one of the column address line for select a display pixel.

The newly submitted claims 24-30 are directing to an image display device having a moving image signal output circuit and a still image signal output circuit which output image data to the display pixel array are provided as circuit configurations independent of each other.

Inventions I (claims 1-23) and II (claims 24-30) are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as each pixel array including a selecting circuit which is connected to one of the row address lines and one of the column address line for select a display pixel without a moving image signal output circuit and a still image signal output circuit which output image data to the display pixel

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array are provided as circuit configurations independent of each other as in invention II. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 24-30 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Specification

2. The amendment filed 8/03/04 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the newly added material "D/A" (on page 12, line 25 to page 13, line 15, page 16, lines 12-21, and page 18, lines 16-22).

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 16, 18, 20, 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The original specification is inadequately written to provide support for and does not disclose the selecting circuit (AND gate 47 as shown in Fig. 2) is implemented with substantially analog circuitry as is now claimed.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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6. Claims 1-15, 17, 19, 21, 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,329,973. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are the broader version of the patented claims, the only difference between the present claims and the patented claims is that the present claims recite each display pixel includes a selecting circuit while the patented claims recite each display pixel includes an AND logical circuit, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to realize that the AND logical circuit is a selecting circuit, therefore, the present claims are not patentably distinct from the patented claims.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 4, 7-12, 14, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuga (US. PAT. NO. 5,546,104).

As to claims 1, 10, 14, 15, Figs. 2 and 3 of Kuga discloses an image display (8) which displays image data on an image display part constructed by a display pixel array, an image data input circuit (10) inputs image data into the image display part by selecting addresses (X and Y locations of the moving image) in a row direction and a column direction of the display pixel

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array so that the display pixel array has two neighboring areas having different frame rates or the inputted image data has at least one moving image data and at least one still image data at different frame rates (col. 2, line 31 to col. 4, line 24). Fig. 1 of Kuga also teaches the display pixel array includes row direction address lines (2) and column direction address lines (1), each pixel includes a selecting circuit (3) which is connected to one of the row direction address lines and one of the column direction address lines and useable to select a display pixel.

As to claim 4, Kuga discloses a frame rate selecting circuit which selects a frame rate of the display pixel array on a display pixel unit basis (e.g., see col. 4, lines 25-51).

As to claims 7, Kuga teaches the image data is divided into a moving image field and a stationary image field (see col. 4, lines 25-51 of Kuga for example).

As to claim 8, Fig. 3 of Kuga shows a position of moving image area, wherein the moving image area is changed based on the inputted image signal.

As to claim 9, Kuga teaches the LCD pixel array using a TN mode liquid crystal (Col. 4, lines 52-53).

As to claim 11, Kuga teaches the moving image data is inputted into the display part in a real-time manner from generation of data.

As to claim 12, Fig. 2 of Kuga teaches a storing circuit (13) temporarily stores the still image data until it is inputted into the display part.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuga in view of Ishii et al (US. PT. NO. 4,751,502 hereinafter Ishii).

Kuga does not disclose a code data storing circuit for storing gradation data in a predetermined code data format. However, Ishii teaches a LCD display device having a code data storing circuit (Table) for storing gradation data in a predetermined code data format. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kuga to have a gradation data storing circuit as taught by Ishii so as to provide a gray scale in Kuga's LCD display device.

11. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuga in view Reilly (US. PAT. NO. 6,580,422).

As to claim 2, Fig. 2 of Kuga the display device having an image data generating circuit (PC side) and an image data input circuit (display apparatus side), and a transmitting circuit (connecting lines) for transmitting image data generated by PC side to the display apparatus side. Kuga does not disclose the display device having a wireless signal transmitting circuit for wirelessly transmitting image data generated by the image data generating circuit to the image data input circuit. However, Fig. 1 of Reilly teaches a computing device for wirelessly transmitting image data generated by the computer device (101) to a remote display device (107). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display device of Kuga to have a wireless transmitting circuit

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as taught by Reilly so as to transfer display information to a remote display device by a wireless data link and to generate the video image on the remote display device.

As to claim 3, Reilly teaches the computer device 101 having a display screen (a second image display part) has a smaller portability than the image display part (in the remote display device 107), wherein the image data generated by the computer device is displayed on the display screen of the computer device 101.

12. Claims 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuga in view McKnight (US. PAT. NO. 5,959,598).

Kuga does not explicitly disclose the selecting circuit is implemented with substantially analog circuitry or digital circuitry. However, McKnight teaches a pixel circuit having a transistor selecting circuit which can be used either as an analog pixel or a digital pixel (col. 2, lines 60-63). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kuga's selecting circuit in each pixel to be implemented with analog circuitry or digital circuitry as taught by McKnight so as to provide a display device capable of providing an analog signal or binary signal at each pixel.

13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuga in view Imanishi et al (US. PAT. NO. 5,028,917 hereinafter Imanishi).

Kuga does not disclose the image data input circuit inputs image data having a first gradation precision into one area and inputs image data having a second gradation precision in to another area. However, Imanishi teaches an image display unit having multiple areas, the

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multiple areas can be displayed at individual and different gradations by successively specifying the required areas and desired gradations (see col. 3, line 25-45). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kuga to input different gradation data into different areas of the display screen as taught by Imanishi so as to provide a display device that displays data in multiple areas of the same screen in discrete ranges of gradation while minimizing increased hardware requirements (col. 1, lines 38-41 of Imanishi).

14. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuga and Imanishi as applied to claim 5 above, and further in view Hirai et al (US. PAT. NO. 5,874,933 hereinafter Hirai).

Kuga as modified by Imanishi does not disclose the image data input circuit inputs image data having only two gradations into the one areas of the display. Hirai teaches a LCD display device having a display mode wherein the image is displayed by two-gradation pixels (black and white image, see col. 10, lines 47-59). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the one area of the display array of Kuga as modified by Imanishi to have only two gradations pixel as taught by Hirai so as to provide an display area for displaying an image such as characters and this binary display is suitable for executing gradation representation on the basis of the frame reducing method.

Response to Arguments

15. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Applicants' remarks regarding 112 first paragraph rejections on pages 14-16 are not persuasive. It is not seen anywhere in the specification or elsewhere in the application that supports applicants' position that the "AND gate 47" is implemented with an analog circuit. As evidenced by applicants' parent application (claim 1 for example), applicants have admitted that the "AND gate 47" is an AND logical circuit (digital circuit), the original specification does not provide support that the selecting circuit (AND gate 47) is implemented with substantially analog circuitry as is now claimed. Applicants' remarks are misleading and not persuasive, the issue here is not whether an analog AND gate is well known or can be constructed by a college student, but rather the issue is whether there is support in the specification or not and as set forth in the rejection support for an analog AND gate is lacking in the specification.

Applicants' remarks regarding non-statutory double patenting rejection on page 16 is noted and not persuasive. The non-statutory double patenting rejection will not be removed until a proper Terminal Disclaimer is filed.

Applicants' remarks regarding Kuga on pages 16-18 are not persuasive. In applicants' parent applicant 09/043,534, applicants have incorporated the limitation of "each display pixels including an AND logical circuit" into the independent claims to place the claims in the parent application in condition for allowable. Throughout the prosecution of the parent applicant, applicants allegation regarding Kuga does not having "selecting addresses in row direction and column direction" was found to be not persuasive by the examiner, note the Office Action mailed


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12/7/00 and Advisory Action mailed on 6/19/01 of the parent application 09/043,534. Therefore, the present claims without the aforementioned limitation are clearly anticipated by Kuga and the rejections are proper. Kuga teaches an image data input circuit (10 in Fig. 3) inputs image data into the image display part by selecting X and Y locations of the moving image in a row direction and a column direction of the display pixel array, which reads on selecting addresses in a row direction and a column direction of the display pixel array as claimed. In addition, the image display device of Kuga comprises a memory and driver controlled by the controller for addressing and selecting the X and Y coordinates image data of the display as is conventional in the art, thus even though the word "addresses" is not explicitly used, the meaning and functions are inherent in the cited portions.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (703) 305-4719. The examiner can normally be reached on Monday-Friday from 9AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


REGINA LIANG
PRIMARY EXAMINER
ART UNIT 2674

RL
11/19/04